



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,778	12/08/2003	Tomoaki Miyashita	117769	2364
25944	7590	06/02/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER NGO, HUYEN LE	
			ART UNIT 2871	PAPER NUMBER
DATE MAILED: 06/02/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,778

Applicant(s)

TOMOAKI MIYASHITA

Examiner

Julie-Huyen L. Ngo

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/8/03&2/14/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which paper has been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statements filed on December 8, 2003 and February 15, 2005 have been considered.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "*electro-optical material*" recited in claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the reference sign 621 mentioned at least in line 5 of paragraph 100, page 18 of the description.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

Art Unit: 2871

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 1 is objected to since it appears that "a mounting case" recited in line 4 shall be \_\_the mounting case\_\_.

Claim 8 is objected to because the recitation "*a plate disposed to face one surface of an electro-optical device having a substrate in which projection light from a light source is incident on an image display region,*" in lines 2-3, is inconsistent with what being described and shown in at least figures 1, 4 and 11, which show that the substrate 20 is the substrate *in which projection light from a light source 1102 is incident on an image display region*. Therefore, plate 610 is disposed to face the surface of the electrode-optical that has substrate 10, which is not the substrate in which projection light from the light source 1102 is incident on an image display region.

All claims that are depended from the above-mentioned claims and are not specifically discussed above are objected as bearing the defects of the claims from which they depend.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 6-8 of claim 1, the recitation calling for "*the mounting case accommodating the electro-optical device by holding at least a portion of a peripheral region positioned at the periphery of the image display region of the electro-optical device with at least one of the plate and the cover*," is unclear and inconsistent with what being described in the specification for at least figure 4, which shows that the *peripheral region of the image display region of the electro-optical device is held with only or both the plate 610 and the cover 620*. The term "*at least*" encompasses for more than one of the plate and the cover.

In line 2 of claim 7, the recitation calling "*the substrate including a pair of substrates to hold an electro-optic material there between and at least one dustproof substrate provided in one of the pair of substrates on the surface not facing the electro-optic material*" is unclear and inconsistent with what being described in the specification for at least figures 4 and 11, which show that substrates 400&20 are the "*substrate in which projection light from a light source is incident on an image display region*" recited in claim 1. Therefore, the substrate recited in this claim can NOT *including a pair of substrates to hold an electro-*

Art Unit: 2871

*optic material there between.* Applicant is to note that the electro-optical device (500) further comprises another substrate (10) to hold the electro-optical material there between, and only one dust proof substrate (400) is provided on each of the substrates (10 & 20) and on the surface not facing the electrode optical material. Applicant is to note that the term “at least” using in the context of this claim can be construed for more than one dustproof substrate provided in one of the pair of the substrates.

In line 3 of claim 9, it is unclear of which is the image display region belonged to. It would be clear to recite that the image display region of the electro-optical device”. Also the recitation calling for in the last two lines of this claim, “*heating an original plate to be used as the plate to a predetermined temperature or more, and pressing the original plate after the annealing step.*” is unclear and indefinite since what considers to be “*more*” temperature and when the annealing step is applied and how?

Claims not specifically mentioned above are rejected as bearing the defect(s) of the claim(s) from which they depend.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is the step of forming the cover since the cover is part of the mounting case.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2871

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 to 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 and 8 recites "a substrate in which projection light from a light source is incident on an image display region," in lines 2-3. According to at least figures 1, 4 and 11, this substrate is the counter substrate 20 or the dust proof substrate 400 and the counter substrate 20. However, these substrates are further away from the plate 610, and the coefficient of linear expansion of these substrates are not as critical as the TFT substrate 10 or substrate 400 when comparing to the coefficient of linear expansion of the plate 610 (see paragraph 36 of the specification). Therefore, it is necessary for the plate 610 to have the coefficient of linear expansion within the predetermined range on the basis of the substrate (400&10) that is directly or in a close contact with the plate 610.

Claims not specifically mentioned above are rejected as bearing the defect(s) of the claim(s) from which they depend.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Miyashita et al. (US 20040136146 A1).

Miyashita et al. teach (at least figures 1-14) an Electro-optical device encased in mounting case, a projection display apparatus, and mounting case that comprise all the features recited in claims 1-10.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 14-17, 27 and



Art Unit: 2871

29 of copending Application No. US 20040136146 A1 applied by Miyashita et al, and further in view of TSUCHIYA et al (JP 2002336902 A).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter except for the features recited in claim 4: "the plate being formed by press processing;" claim 5: "the plate being annealed before the press processing;" claim 6: "a light emitting surface of the plate being black"

Although these features were not being claimed; however, these features are fully disclosed in the copending application, they are not considered to be critical to the invention. Moreover, these features are a well known and the process of annealing before pressing a metal plate (claims 4 and 5) is a conventional practice to one of ordinary skill in the art for having uniform material characteristic and to prevent strain due to heating in the process of manufacturing the mounting case for the electro optical device disclosed by Miyashita et al, as evidenced by Tsuchiya et al.

With respect to claim 6, Miyashita et al teach (paragraph 78) that the plate is composed of a material having high heat conductivity, such as an alloy

Art Unit: 2871

including at least iron and nickel for absorbing the heat generated by irradiating the light beam from the light source. Therefore, the light emitting surface of the plate obviously would be black, which is well known for absorbing the heat generated by irradiating the light beam from the light source.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See also MPEP § 804.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 7, 8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimori et al. (US 6819464).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

Art Unit: 2871

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Fujimori et al. teach (figures 6 and 8) forming projection display apparatus comprising:

Claims 1 and 10:

- an electro-optical apparatus comprising an electro-optical device 500 encased in a mounting case 510 and having a substrate 501B in which projection light from a light source is incident on an image display region, the mounting case including a plate 512 disposed to face one surface of the electro-optical device and a cover 511 to cover the electro-optical device, a portion of the cover abutting against the plate, the mounting case accommodating the electro-optical device by holding at least a portion of a peripheral region positioned at the periphery of the image display region of the electro-optical device with at least one of the plate and the cover,
- the plate having a coefficient of linear expansion within a predetermined range on the basis of the coefficient of linear expansion of the substrate (Col. 14, 47-56).
- The optical system to guide the projection light into the electro-optical device (see figure 6)
- a projection optical system (see figure 6) to project the light emitted from the electro-optical device 441/500

Art Unit: 2871

Claim 3:

- the plate being made of an alloy containing at least iron and nickel (Col. 13, lines 39-50).

Claim 6:

- the light emitting surface of the plate 512 being black since it contain a metal material such as nickel and the like, the same material used by applicant (see paragraph 100).

Claim 7:

- the substrate including a pair of substrates 501a & 501B to hold an electro-optic material there between and at least one dustproof substrate 502A/502B provided in one of the pair of substrates on the surface not facing the electro-optic material.

Claim 8:

- A mounting case 510 comprising a plate 512 disposed to face one surface of an-electro-optical device 500 having a substrate 501B/502B in which projection light from a light source 411 is incident on an image display region, and a cover 511 to cover the electro-optical device, a portion of the cover abutting against the plate

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2871

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over Fujimori et al.

(US 6819464) as applied above to claim 1, and further obvious as follow:

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Fujimori et al. (US 6819464) teach (col. 14, lines 47-56) that when the linear expansion coefficient of the fixed plate 512 and the frame member 512C approximates to the linear expansion coefficient of the dust-proof glass 502A and the first substrate

Art Unit: 2871

501A, prefer not more than  $6 \times 10^{-6}$  /K, the dimension variation (expansion and contraction) between the fixing plate 512 and the frame member 512C and the dust-proof glass 502A and the first substrate 501A caused by the heat of the respective components can be made approximately equal. Since the dimension variation (expansion and contraction) of the respective components caused by heat becomes the same, reliability of the electro-optical device (500/441) can be greatly improved. Note that the linear expansion coefficient of the dust-proof glass 502A and the first substrate 501A prefers not more than  $6 \times 10^{-6}$  /K that is less than or equal to  $6 \times 10^{-6}$  /K =  $71.52 \times 10^{-6}$  /C, which includes the range of  $\pm 5 \times 10^{-6}$  /C. Therefore, the plate 512 would obviously have the coefficient of linear expansion within a predetermined range on the basis of the coefficient of the linear expansion of the substrate, i.e., the dust-proof glass 502A and the first substrate 501A. Doing so would improve the reliability of the electro-optical device encased in the mounting case of the electro-optical apparatus as taught by Fujimori et al.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being obvious over Fujimori et al. (US 6819464) as applied above to claim 1, and further in view of TSUCHIYA et al (JP 2002336902 A).

Tsuchiya et al teach adjusting a metal plate on which differential thickness parts are formed into the metal plate having uniform material characteristic by annealing and to prevent strain due to heating.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to anneal the plate 512 before the press processing

Art Unit: 2871

for having uniform material characteristic and to prevent strain due to heating in the process of manufacturing the mounting case 510 for the electro optical device disclosed by Fujimori et al, as taught by Tsuchiya et al.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsuo et al (US 20050073623 A1) disclose a flat panel display including a housing, a panel module and a main bracket.

Fujimori et al (US 5988818 A) discloses a projection type liquid crystal projector comprising a housing with the chassis plates 8a and 8b, the fixing plates 11, 12, 19, 23, and 42, the upper fixing auxiliary plates 29 and 47, the lower fixing auxiliary plates 34, and 44, and so forth are made of the same material such as steel parts, they have the same coefficient of linear expansion. Thus, the parts of the adjustment mechanism uniquely expand and shrink.

Takizawa, Takeshi (US 20020015119 A1) disclose an optical component and projector containing a retaining frames 81, formed of a synthetic resin, and the cross-dichroic prism 45, formed of an optical glass, are connected to each other via the frame members 82, formed of a metal having a coefficient of thermal expansion which is between the coefficients of thermal expansion of the synthetic resin and glass. Thus, even if heat occurs from the light source, etc., when the projector 1 is used, any impact caused by the difference in coefficients of thermal expansion between the cross-dichroic prism 45 and the retaining frames 81 may be compensated for to some

Art Unit: 2871

extent by the frame members 82. Accordingly, the change in the relative position between the retaining frames 81 and the cross-dichroic prism 45 due to the difference in coefficients of thermal expansion may be suppressed.

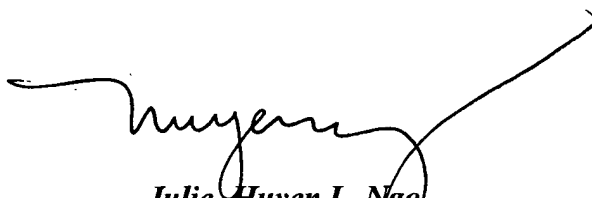
***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (571) 272-2295. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (571) 272-2293.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562.

May 27, 2005



***Julie-Huyen L. Ngo***  
Primary Examiner  
Art Unit 2871